



TIIG

INJURY SURVEILLANCE IN THE NORTH WEST OF ENGLAND

FALLS IN LANCASHIRE: AN ANALYSIS OF EMERGENCY DEPARTMENT AND AMBULANCE DATA (OCTOBER 2012 TO SEPTEMBER 2013)

INTRODUCTION

Falls are a significant public health concern, which place a burden on health services¹. For instance, falls are estimated to cost the NHS more than £2.3 billion per year². Hospital Episode Statistics reported 8,367 hospital admissions to Lancashire Accident and Emergency Departments (AEDs) in 2010/11 due to falls, a rate of 535 per 100,000 population, higher than the England average (498 per 100,000 population)³.

While all people who fall are at risk of injury, the age, gender and health of the individual can affect the type and severity of injury⁴. Evidence shows that older people are at more risk of experiencing a fall^{1,4}; however children are also a high risk group⁴. Those working in injury prevention should emphasise education and training, create safer environments and establish policies to reduce risk^{1,4}, with a focus on at-risk groups.

This report provides an indication of the burden of falls on health services and residents of Lancashire over a twelve-month period, October 2012 to September 2013, using:

- Data on fall-related injury attendances to the AEDs across Lancashire which collect data on falls as a specified injury group (See Box 1); and,
- Data on ambulance call outs in Lancashire for falls, accessed through the North West Ambulance Service.

Box 1: Falls and other injuries

Only two AEDs in Lancashire currently record falls as a specified injury group: Chorley and South Ribble Hospital, and Royal Preston Hospital. All other AEDs capture falls within the 'other injury' category. However, falls can be identified from other data items for Blackpool Victoria Hospital and Royal Blackburn Hospital, as per the following criteria:

Blackpool Victoria Hospital: Where the patient group is 'Other accident' and the presenting complaint is 'Falls.'

Royal Blackburn Hospital: Where the TIIG injury group is 'Other injury' and the patient group [not typically reported on] is 'Elderly falls'; and, where the TIIG injury group is 'Other injury' and the first of complaint code is 'Fall.'

Figures presented in this report are for AED fall attendances to Blackpool Victoria Hospital, Chorley and South Ribble Hospital, Royal Blackburn Hospital and Royal Preston Hospital only. Consequently, it is not possible to ascertain actual numbers of fall-related injuries presenting at Lancashire AEDs. Therefore figures should be treated with caution.

NUMBERS OF FALL-RELATED INJURIES

Between October 2012 and September 2013, there were 24,056 attendances to Blackpool Victoria Hospital, Chorley and South Ribble Hospital, Royal Blackburn Hospital and Royal Preston Hospital AEDs due to injuries sustained by a fall. Of these, 22,621 were residents of Lancashire (94.0%) (Table 1).

Table 1 also illustrates the number of attendances to each department. There were substantially higher numbers of attendances to Royal Preston Hospital and Chorley and South Ribble Hospital (48.5% and 29.7% respectively). This could be due to recording practices, as indicated in Box 1 above.

Overall, just under three in ten (29.4%) of fall attendees were resident in Preston local authority, followed by over one-fifth (21.0%) in South Ribble and one-fifth (19.9%) in Chorley. Again, this is likely to be due to only Chorley and South Ribble Hospital and Royal Preston Hospital recording falls as a separate injury group.

Of all fall attendees to Blackpool Victoria Hospital, 91.9% were Lancashire residents. Specifically, more than half (51.1%) were from Blackpool and more than one-fifth (21.7%) were from Fylde. More than nine in ten (92.0%) attendances to Chorley and South Ribble Hospital were made by residents of Lancashire. More than three in five (61.1%) were from Chorley and over a third (36.4%) from South Ribble. At Royal Blackburn Hospital, 97.9% of fall attendees were from Lancashire. Over three in ten (30.9%) were resident in Blackburn-with-Darwen, followed by one-fifth (19.6%) resident in Burnley, 18.0% in Hyndburn, 12.6% in Pendle and 10.9% in Rossendale. Of the attendees to Royal Preston Hospital, 95.3% were residents of Lancashire. Explicitly, just under three-fifths (59.1%) were from Preston and over one in five (21.2%) from South Ribble.

Table 1: Number of AED attendances for fall-related injuries by hospital and local authority of residence, October 2012 to September 2013^A

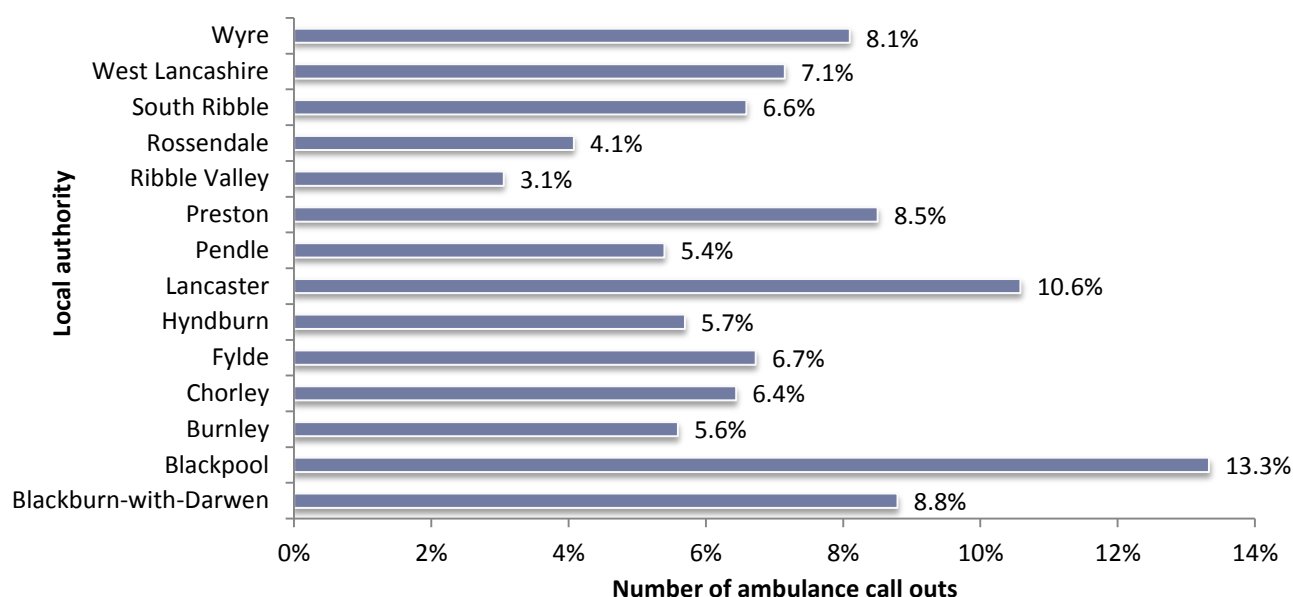
	Blackpool Victoria Hospital		Chorley and South Ribble Hospital		Royal Blackburn Hospital		Royal Preston Hospital		Total	
All attendances	3440		7135		1820		11661		24056	
	n	%	n	%	n	%	n	%	n	%
Lancashire residents only	3160	91.9%	6561	92.0%	1782	97.9%	11118	95.3%	22621	94.0%
Local authority of residence										
<i>Blackburn-with-Darwen</i>	***	0.1%	<40	0.5%	551	30.9%	44	0.4%	634	2.8%
<i>Blackpool</i>	1615	51.1%	***	0.0%	0	-	<55	0.5%	1669	7.4%
<i>Burnley</i>	***	0.1%	***	0.0%	349	19.6%	25	0.2%	379	1.7%
<i>Chorley</i>	***	0.1%	4010	61.1%	***	0.2%	482	4.3%	4499	19.9%
<i>Fylde</i>	685	21.7%	<10	0.1%	***	0.2%	551	5.0%	1248	5.5%
<i>Hyndburn</i>	***	0.1%	***	0.0%	321	18.0%	22	0.2%	349	1.5%
<i>Lancaster</i>	***	0.1%	***	0.1%	***	0.1%	43	0.4%	52	0.2%
<i>Pendle</i>	***	0.1%	***	0.1%	224	12.6%	10	0.1%	241	1.1%
<i>Preston</i>	<10	0.3%	56	0.9%	***	0.2%	6572	59.1%	6640	29.4%
<i>Ribble Valley</i>	6	0.2%	6	0.1%	127	7.1%	507	4.6%	646	2.9%
<i>Rossendale</i>	***	0.0%	***	0.0%	194	10.9%	14	0.1%	211	0.9%
<i>South Ribble</i>	5	0.2%	2388	36.4%	5	0.3%	2353	21.2%	4751	21.0%
<i>West Lancashire</i>	***	0.1%	32	0.5%	0	-	<50	0.4%	84	0.4%
<i>Wyre</i>	816	25.8%	7	0.1%	0	-	395	3.6%	1218	5.4%

Ambulance data on falls, sourced from the North West Ambulance Service (NWAS), cover the whole of Lancashire. Figure 1 illustrates the number of ambulance call outs due to falls to each of the local authorities in Lancashire. Overall there were 22,801 ambulance call outs for fall-related injuries between October 2012 and September 2013. This is a decrease of 23.2% in comparison to January – December 2010 (n = 29,700⁵).

Blackpool local authority had the highest number of call outs (n = 3,039; 13.3%), followed by 2,413 to Lancaster (10.6%) and 2,004 to Blackburn-with-Darwen (8.8%), showing differences in comparison to the numbers of attendances to AEDs in Lancashire (see Table 1). These variations are due to numerous factors: not all Lancashire AEDs report on falls as an injury group and recording practices vary; not all fall-related injury attendees will have attended via ambulance; and, AED data reports on the patients' area of residence whereas the North West Ambulance Service data reports on the location of where the ambulance was called out to.

^A Please note that all numbers less than five have been suppressed (with ***) in line with patient confidentiality and if there is only one number less than five in a category then two numbers will be suppressed to prevent back calculations from totals.

Figure 1: Percentage of ambulance call outs for fall-related injuries by local authority of the incident location, October 2012 to September 2013



Number of ambulance call outs = 22,801.

As figures for AED presentations for falls are not accurately represented, Table 2 displays the top ten hospitals attended following an ambulance call out for a fall-related injury in Lancashire. This provides an indication of fall attendances across the region's hospitals. However these figures should be treated with caution as a proportion of fall attendees present via other arrival methods.

Over four thousand patients were taken to Blackpool Victoria Hospital (n = 4,157) and Royal Blackburn Hospital (n = 4,086). Furthermore, a number of patients picked up in Lancashire were taken to hospitals outside of the county, including Southport and Formby District General Hospital, Merseyside (n = 947), Airedale General Hospital, Yorkshire (n = 281) and Royal Albert Edward Infirmary, Greater Manchester (n = 148).

Table 2: Number of ambulance call outs for fall-related injuries by hospital attended (top ten hospitals only), October 2012 to September 2013

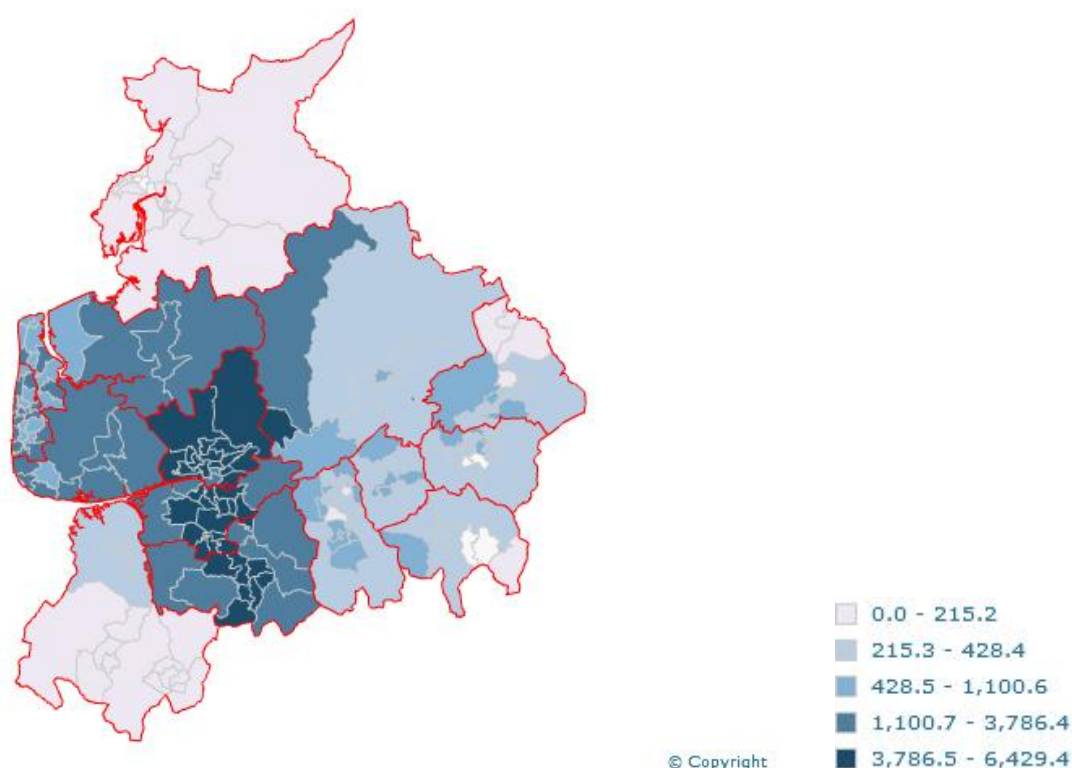
Hospital attended following ambulance call out	Hospital location	AED/UCC*	n
Blackpool Victoria Hospital	Lancashire	AED	4157
Royal Blackburn Hospital	Lancashire	AED & UCC	4086
Royal Preston Hospital	Lancashire	AED	2761
Royal Lancaster Infirmary	Lancashire	AED	1563
Chorley and South Ribble District Hospital	Lancashire	AED	1172
Southport and Formby District General Hospital	Merseyside	AED	947
Burnley General Hospital	Lancashire	UCC	317
Airedale General Hospital	Yorkshire	AED	281
Royal Albert Edward Infirmary (Wigan)	Greater Manchester	AED	148
Ormskirk and District General Hospital	Lancashire	AED & UCC	73

* UCC = Urgent Care Centre

AREA OF RESIDENCE OF AED ATTENDANCES

As identified above (Table 1), the highest proportions of fall attendances to an AED in Lancashire were from Preston, South Ribble and Chorley local authorities (29.4%, 21.0% and 19.9% respectively). Figure 2 illustrates the crude rates of Middle Layer Super Output Area of Residence (MSOA)^B for AED attendances. Crude rates per 100,000 population were highest in Preston 009 (n = 654 [6429.41 per 100,000 population]) and Preston 005 (n = 349 [5799.27 per 100,000 population]). However, due to recording practices this figure does not accurately reflect the full extent of AED attendances due to falls across Lancashire.

Figure 2: Crude rates per 100,000 population of AED attendances for fall-related injuries by MSOA of residence, overlaid by local authority boundaries (Lancashire residents only), October 2012 to September 2013



Top five MSOAs

MSOA code	MSOA name	n	Crude rate per 100,000	95% confidence interval ^C	
				Lower limit	Upper limit
E02005261	Preston 009	654	6429.41	5946.03	6941.63
E02005257	Preston 005	349	5799.27	5206.73	6440.77
E02005259	Preston 007	574	5612.59	5162.77	6091.12
E02005265	Preston 013	601	5502.66	5071.45	5960.72
E02005194	Chorley 006	453	5494.91	5000.47	6025.00

^B Super Output Areas are used in the reporting of small area statistics, broken down into Lower Layer Super Output Areas (LSOA) and Middle Layer Super Output Areas (MSOA). For more information, visit:

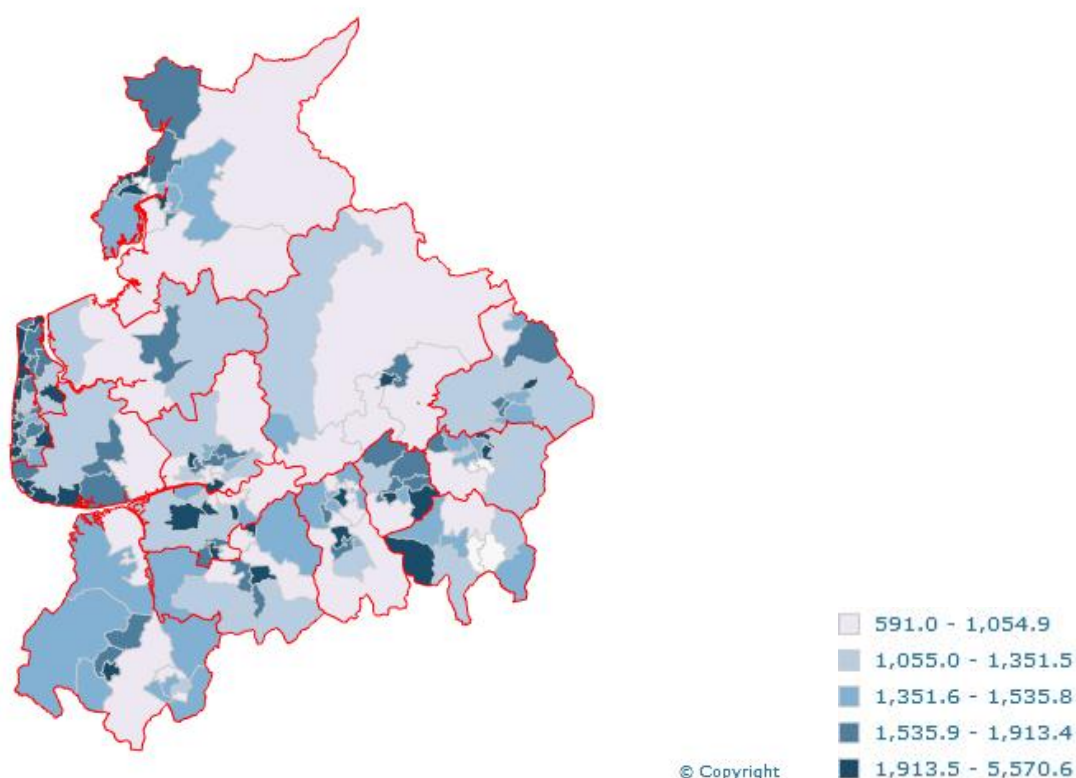
<http://www.ons.gov.uk/ons/guide-method/geography/beginner-s-guide/census/super-output-areas--soas-/index.html>

^C Confidence intervals (CIs) are a range of values indicating the uncertainty there is around the estimation of a calculated rate; the wider the confidence interval, the more uncertainty there is. CIs are normally calculated at a 95% confidence level, representing the range in which the true population value will lie 95 out of 100 times⁶.

LOCATION OF AMBULANCE CALL OUTS

Figure 3 demonstrates the crude rates of ambulance call outs across Lancashire for fall-related injuries, highlighting the ten MSOAs where rates were highest. The two MSOAs where the crude rates for ambulance call outs were highest were: Blackpool 010 (n = 392 [5570.56 per 100,000 population]) and Blackpool 006 (n = 300, [4660.56 per 100,000 population]).

Figure 3: Crude rates per 100,000 population of ambulance call outs for fall-related injuries by MSOA location of call out, overlaid by local authority boundaries, October 2012 to September 2013



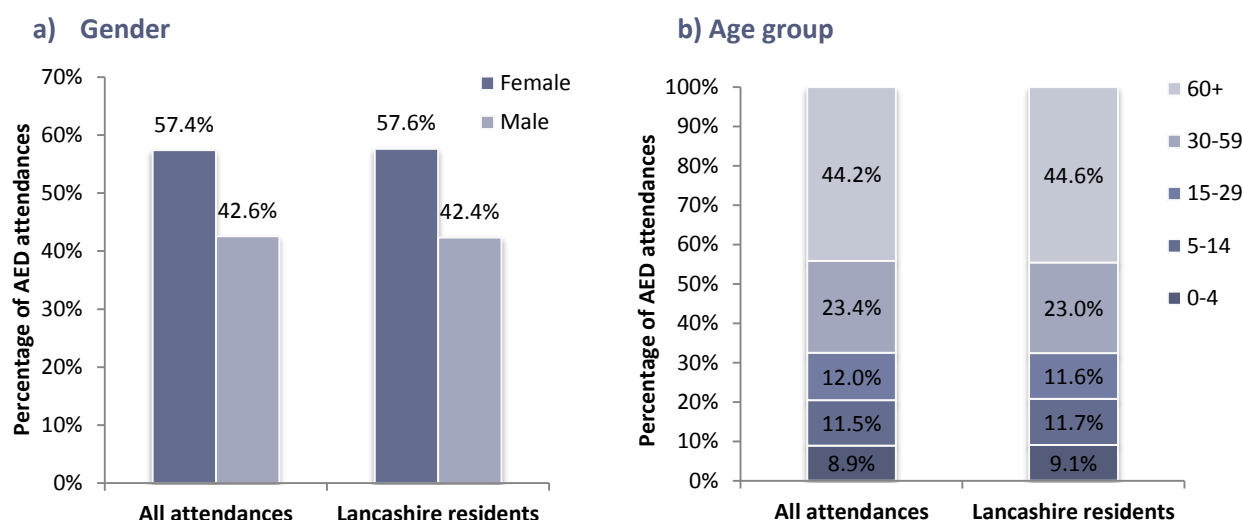
Top ten MSOAs

MSOA code	MSOA name	n	Crude rate per 100,000	95% confidence interval	
				Lower limit	Upper limit
E02002642	Blackpool 010	392	5570.56	5032.68	6150.26
E02002638	Blackpool 006	300	4660.56	4148.04	5218.91
E02005208	Fylde 006	387	3892.58	3514.37	4300.39
E02002645	Blackpool 013	222	3846.15	3356.82	4386.76
E02002620	Blackburn with Darwen 006	308	3649.72	3253.46	4080.94
E02005224	Lancaster 004	186	3576.92	3081.33	4129.54
E02005310	West Lancashire 007	269	3259.82	2881.87	3673.56
E02005226	Lancaster 006	224	2839.76	2480.02	3237.00
E02005269	Preston 017	280	2789.96	2472.71	3136.62
E02005230	Lancaster 010	174	2657.30	2277.12	3082.80

PATIENT DEMOGRAPHY

The gender and age groups of patients attending an AED with injuries sustained from a fall are presented in Figure 4. In the twelve month period, there were more female than male attendances (females: all attendances = 57.4%; Lancashire residents = 57.6%) (Figure 4a). Attendees aged 60 years and above accounted for the highest proportion of fall injury attendances (all attendances = 44.2%; Lancashire residents = 44.6%) (Figure 4b).

Figure 4: Percentage of AED attendances for fall-related injuries by gender and age group, October 2012 to September 2013^D

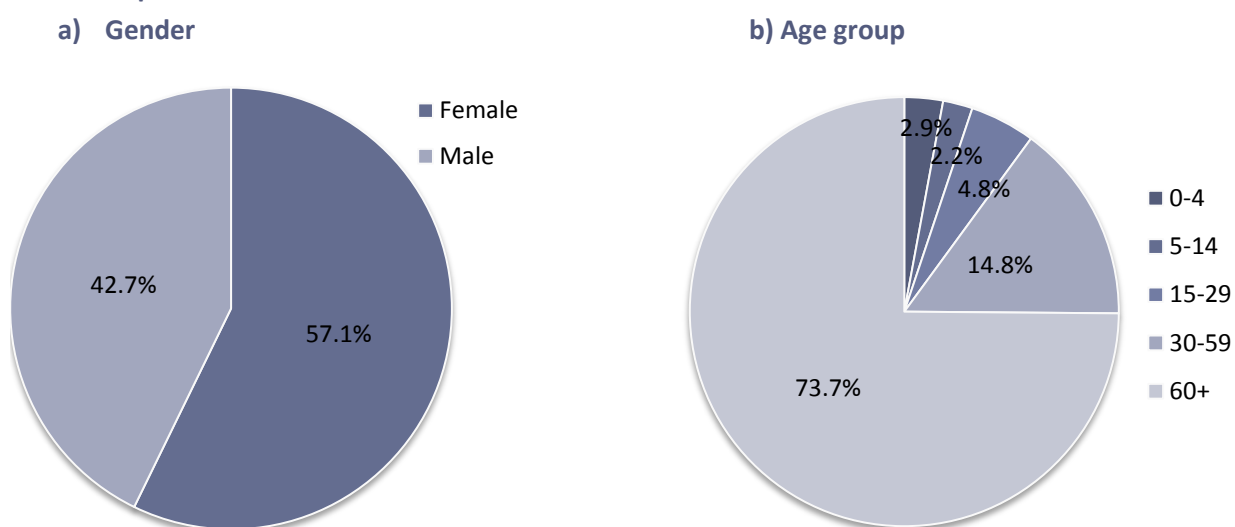


Number of AED attendances: All attendances = 24,056; Lancashire residents = 22,621.

The patient demographics of fall attendees are reflected in that of ambulance call outs across Lancashire. Figure 5 demonstrates there were more females than males who had an ambulance called out for a fall-related injury (females = 57.1%) (Figure 5a) and just fewer than three-quarters (73.7%) of patients were aged 60 years or more (Figure 5b).

^D There were two AED attendances where the gender was unknown; one of these was a Lancashire resident. There was one AED attendance where the age was unknown; this was a Lancashire resident.

Figure 5: Percentage of ambulance call outs for fall-related injuries by gender and age group, October 2012 to September 2013^E



Number of ambulance call outs = 22,801.

Table 3 shows the age group and gender of AED attendances and ambulance call outs due to falls. Generally, patients with fall-related injuries were females aged 60 years and above. Table 3, however, shows differences in the numbers of men and women across some of the age groups. For AED attendees aged 14 years or less there were more males than females presenting with injuries sustained by a fall. For ambulance call outs due to falls, there were more males than females across all age groups except for patients aged 60 years and above.

Table 3: Number of AED attendances for fall-related injuries by age group and gender, October 2012 to September 2013^{E,F}

	Age group											
	0-4		5-14		15-29		30-59		60+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
All AED attendances												
Females	944	6.8%	1240	9.0%	1524	11.0%	3135	22.7%	6970	50.5%	13814	100.0%
Males	1208	11.8%	1526	14.9%	1368	13.4%	2487	24.3%	3651	35.7%	10240	100.0%
Total	2152	8.9%	2768	11.5%	2892	12.0%	5622	23.4%	10621	44.2%	24056	100.0%
AED attendances - Lancashire residents only												
Females	899	6.9%	1175	9.0%	1408	10.8%	2943	22.6%	6611	50.7%	13037	100.0%
Males	1164	12.1%	1462	15.3%	1219	12.7%	2270	23.7%	3468	36.2%	9583	100.0%
Total	2063	9.1%	2638	11.7%	2627	11.6%	5213	23.0%	10079	44.6%	22621	100.0%
Ambulance call outs across Lancashire												
Females	307	2.4%	189	1.5%	478	3.7%	1457	11.2%	10451	80.3%	13013	100.0%
Males	343	3.5%	312	3.2%	626	6.4%	1925	19.8%	6350	65.3%	9725	100.0%
Total	653	2.9%	501	2.2%	1104	4.8%	3382	14.8%	16806	73.7%	22801	100.0%

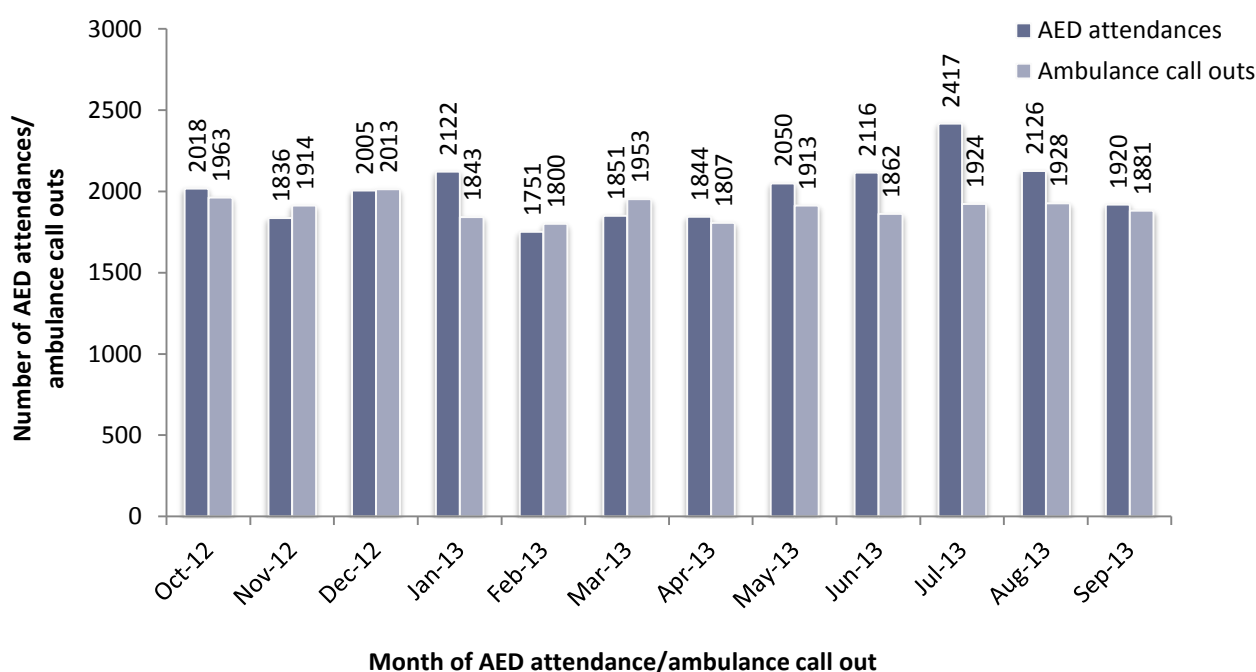
^E There were 63 ambulance call outs where the gender was unknown and 355 ambulance call outs where the age was unknown. These have been included in the totals in Table 3.

^F There were two AED attendances where the gender was unknown; one was a Lancashire resident. There was one AED attendance where the age was unknown; this was a Lancashire resident. These have been included in the totals.

DATE AND TIME OF AED ATTENDANCES AND AMBULANCE CALL OUTS

Figure 6 shows that between October 2012 and September 2013, the month with the highest number of fall attendances to an AED was July 2013 (n = 2,417; 10.0%), compared to February 2013, the month with the fewest (n = 1,751; 7.3%). The month with the highest number of ambulance call outs across Lancashire due to a fall was December 2012 (n = 2,013; 8.8%) and the month with the fewest was February 2013 (n = 1,800; 7.9%).

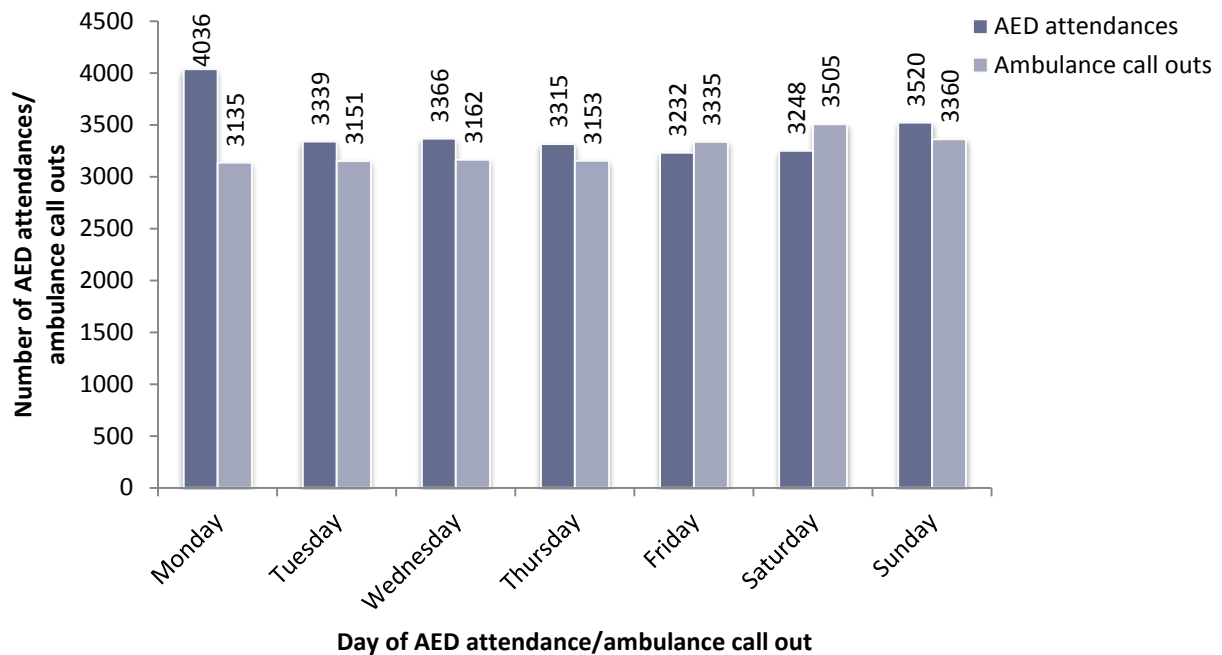
Figure 6: Number of AED attendances and ambulance call outs for fall-related injuries by month, October 2012 to September 2013



Total number of AED attendances = 24,056; total number of ambulance call outs = 22,801.

The day of the week with the highest number of AED attendances was Monday (n = 4,036; 16.8%), followed by Sunday (n = 3,520; 14.6%). The highest proportion of ambulance call outs for falls was Saturday (n = 3,505; 15.4%), followed by Sunday (n = 3,360; 14.7%) and Friday (n = 3,335; 14.6%) (Figure 7).

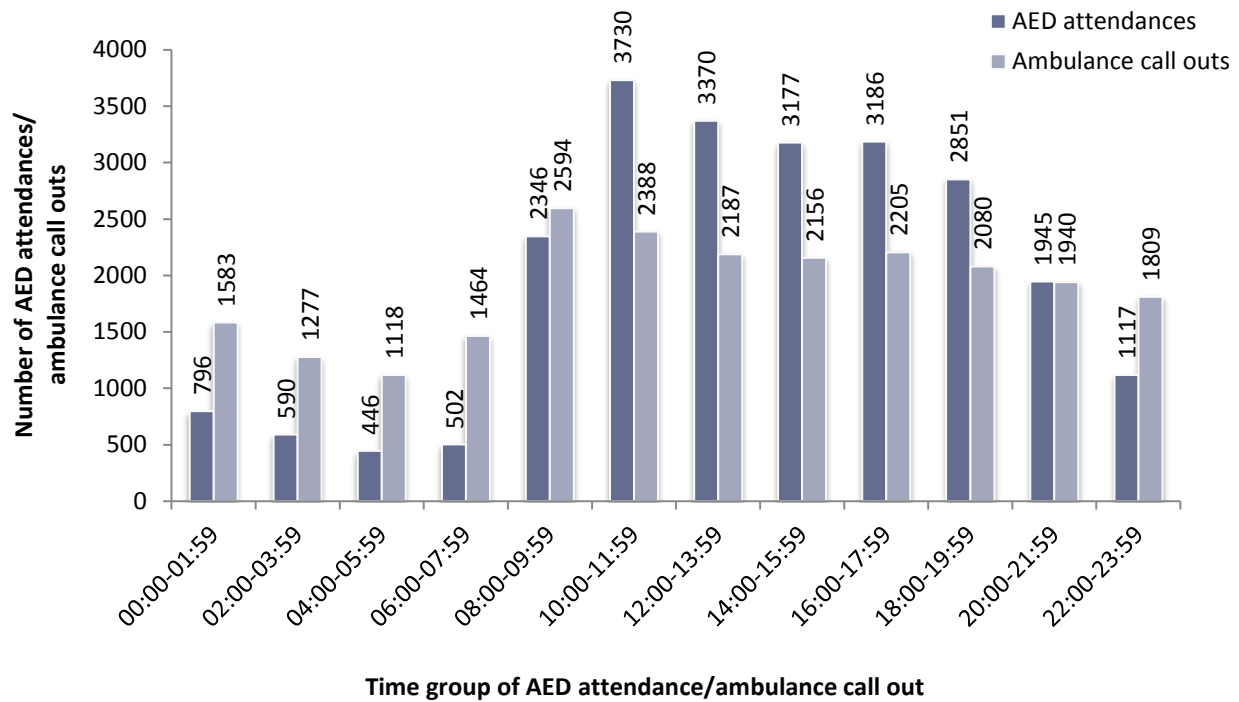
Figure 7: Number of AED attendances and ambulance call outs for fall-related injuries by day, October 2012 to September 2013



Total number of AED attendances = 24,056; total number of ambulance call outs = 22,801.

Figure 8 shows the time group of AED attendances and ambulance call outs for injuries caused by a fall. AED attendances peaked between 10:00 and 11:59 ($n = 3,730$; 15.5%), followed by 14.0% between 12:00 and 13:59 ($n = 3,370$) and 13.2% each between 16:00 and 17:59 ($n = 3,186$) and 14:00 and 15:59 ($n = 3,177$). Ambulance call outs peaked between 08:00 and 09:59 ($n = 2,594$; 11.4%) followed by 10.5% between 10:00 and 11:59 ($n = 2,388$).

Figure 8: Number of AED attendances and ambulance call outs for fall-related injuries by time group, October 2012 to September 2013



Total number of AED attendances = 24,056; total number of ambulance call outs = 22,801.

INJURY LOCATION

The primary incident location for falls was the home (all attendances = 48.7%; Lancashire residents = 50.0%) (Table 4). Just under one-fifth of falls occurred in a public place (all attendances = 19.2%; Lancashire residents = 18.6%).

Table 4: Number of AED attendances for fall-related injuries by incident location, October 2012 to September 2013^{G,H}

Location	All attendances		Lancashire residents	
	n	%	n	%
Home	10824	48.7%	10424	50.0%
Public place	4270	19.2%	3880	18.6%
Other location	2460	11.1%	2169	10.4%
Educational establishment	897	4.0%	866	4.2%
Work	805	3.6%	729	3.5%
Home - other person's	582	2.6%	515	2.5%
Garden	461	2.1%	443	2.1%
Playing out	447	2.0%	426	2.0%
Holiday	351	1.6%	329	1.6%
Public building	320	1.4%	293	1.4%
Public park/playground	287	1.3%	266	1.3%
Sport	268	1.2%	247	1.2%
Nursery	114	0.5%	111	0.5%
Hospital	76	0.3%	73	0.4%
Special event	33	0.1%	29	0.1%
Prison	22	0.1%	21	0.1%
Public transport	19	0.1%	18	0.1%
Total	22236	100.0%	20839	100.0%

ARRIVAL MODE

Table 5 illustrates the mode of arrival to the AED for fall injury attendances. More than half of fall attendees arrived by private transport (all attendances = 51.9%; Lancashire residents = 52.0%), followed by just under a third who arrived by ambulance (all attendances = 32.3%; Lancashire residents = 32.0%).

^G There were 1,820 AED attendances where the incident location was unknown; 1,782 of these were Lancashire residents. These have been omitted from the table. Please note that Royal Blackburn Hospital does not record the incident location.

^H Educational establishment = educational establishment, college/university, school playground, school sport, school - other; Public building = public building, pub/club/bar - inside, pub/club/bar - outside; Public transport = Public transport, bus station.

Table 5: Number of AED attendances for fall-related injuries by arrival mode, October 2012 to September 2013^{l,j}

Arrival mode	All attendances		Lancashire residents	
	n	%	n	%
Private transport	11837	51.9%	11139	52.0%
Ambulance	7366	32.3%	6856	32.0%
Other	2419	10.6%	2277	10.6%
Public transport	807	3.5%	774	3.6%
Pedestrian	346	1.5%	324	1.5%
Police/prison escort	46	0.2%	43	0.2%
Total	22821	100.0%	21413	100.0%

PATIENT DISPOSAL

The disposal method can provide an indication of the severity of injuries sustained. Less than three-fifths of fall attendees were discharged from the AED with no follow-up treatment required (all attendances = 57.0%; Lancashire residents = 56.9%) (Table 6). More than a quarter of attendees required a referral or follow-up for further treatment (all attendances = 26.3%; Lancashire residents = 26.4%), with 14.3% of all attendances and 14.4% of Lancashire residents admitted to hospital.

Table 6: Number of AED attendances for fall-related injuries by disposal method, October 2012 to September 2013^k

Disposal method	All attendances		Lancashire residents	
	n	%	n	%
Discharged	13689	57.0%	12865	56.9%
Follow-up/referral	6317	26.3%	5955	26.4%
Admitted	3444	14.3%	3251	14.4%
Other	566	2.4%	512	2.3%
Died	9	0.0%	9	0.0%
Total	24025	100.0%	22592	100.0%

Table 7 demonstrates that less than three-fifths (56.2%) of female attendances from Lancashire were discharged. More than a quarter (26.9%) required a referral or follow-up for further treatment and 15.2% admitted to hospital. Less than three in ten (27.4%) of females aged 60 years or more required a follow-up

^l There were 1,235 AED attendances where the arrival mode was unknown; 1,208 of these were Lancashire residents. These have been omitted from the table.

^j Ambulance = ambulance, helicopter, voluntary ambulance; Private transport = private transport, car; Other = Taxi, PETT vehicle, dropped off, other.

^k There were 31 AED attendances where the disposal method was unknown; 29 of these were Lancashire residents. These have been omitted from the table.

or referral and over a quarter (25.9%) were admitted. Less than a third (32.1%) of females aged between 30 and 59 years required a follow-up or referral.

In comparison, there were slightly smaller proportions of males who were referred for follow-up treatment or admitted to hospital (25.6% and 13.3% respectively). Over a quarter (25.9%) of males aged 60 years and above were admitted to hospital, followed by 24.4% who required a referral or follow-up treatment. Over three in ten (31.9%) males aged between 30 and 59 years required a referral or follow-up, and similarly, 31.5% of 15-29 year old males also required a referral or follow-up.

Table 7: Number of AED attendances for fall-related injuries by disposal method, age group and gender (Lancashire residents only), October 2012 to September 2013^{LM}

Disposal method	Age group											
	0-4		5-14		15-29		30-59		60 plus		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Females												
Discharged	706	78.5%	831	70.7%	968	68.8%	1791	60.9%	3014	45.7%	7311	56.2%
Follow-up/referral	121	13.5%	284	24.2%	353	25.1%	944	32.1%	1803	27.4%	3505	26.9%
Admitted	46	5.1%	43	3.7%	36	2.6%	142	4.8%	1709	25.9%	1976	15.2%
Other	26	2.9%	17	1.4%	51	3.6%	66	2.2%	57	0.9%	217	1.7%
Died	0	-	0	-	0	-	0	-	5	0.1%	5	0.0%
Total	899	100.0%	1175	100.0%	1408	100.0%	2943	100.0%	6588	100.0%	13014	100.0%
Males												
Discharged	932	80.1%	990	67.7%	741	60.8%	1223	53.9%	1667	48.1%	5553	58.0%
Follow-up/referral	143	12.3%	356	24.4%	384	31.5%	723	31.9%	844	24.4%	2450	25.6%
Admitted	57	4.9%	85	5.8%	46	3.8%	191	8.4%	896	25.9%	1275	13.3%
Other	31	2.7%	31	2.1%	48	3.9%	<135	5.8%	<55	1.5%	<300	3.1%
Died	0	-	0	-	0	-	***	0.0%	***	0.1%	***	0.0%
Total	1163	100.0%	1462	100.0%	1219	100.0%	2270	100.0%	3463	100.0%	9577	100.0%

OLDER ADULTS IN LANCASHIRE

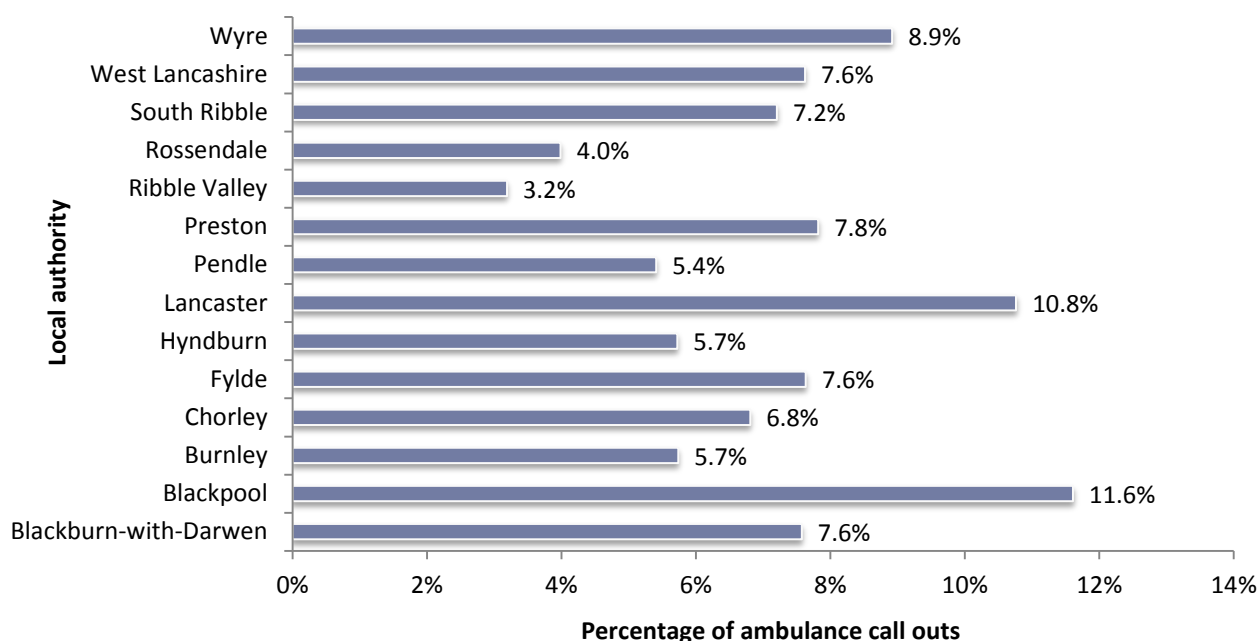
As stated in the introduction, evidence shows that older people are at more risk of experiencing a fall^{1,4}. Between October 2012 and September 2013, there were 10,079 AED attendances for falls made by Lancashire residents aged 60 years and above. The following tables have been included in the report to look at this patient group in more detail.

^L There were 29 AED attendances where the disposal method was unknown; these have been omitted from the table. In addition, there was one AED attendance where the gender was unknown and one AED attendance where the age was unknown; these have also been omitted from the table.

^M Please note that all numbers less than five have been suppressed (with ***) in line with patient confidentiality and if there is only one number less than five in a category then two numbers will be suppressed to prevent back calculations from totals.

Ambulance call outs for falls in those aged 60 years plus were more pronounced in Blackpool (n = 1,951; 11.6%) and Lancaster (n = 1,809; 10.8%) local authorities (Figure 9).

Figure 9: Percentage of ambulance call outs for fall-related injuries by local authority of residence (Lancashire residents only aged 60 years plus), October 2012 to September 2013



Number of ambulance call outs (60 years plus) = 16,806.

The primary incident locations for fall attendees aged 60 years and above from Lancashire were in the home and public place. More than seven in ten (70.9%) of females incurred an injury from a fall at home compared to 67.5% of males. Falls which occurred in a public place accounted for 13.6% of females and 15.0% of males (Table 8).

For female attendances, as the age group category increased the proportions of falls which occurred in the home also increased, as falls in a public place decreased. Explicitly, within the 60-64 years category, there were 45.9% of falls which occurred in the home and 25.2% in a public place, compared to 80.2% and 9.2% (respectively) for those aged 75 years and above.

Over half (51.3%) of fall-related injuries sustained by 60-64 year old males occurred in the home which decreased slightly to 50.9% for 65-69 year olds. Injuries in the home increased to 59.2% for those aged between 70 and 74 years and increased a further 17.0% for those aged 75 years and above (76.2%). Over one in five (20.8%) of males aged between 60 and 64 years sustained injuries from a fall in a public place which increased to a quarter (25.3%) for those aged between 65 and 69. Injuries in a public place then increased for 70-74 year olds and 75 years plus (19.1% and 10.8% respectively).

Table 8: Number of AED attendances for fall-related injuries by injury location, age group and gender (Lancashire residents aged 60 years plus only), October 2012 to September 2013^{N,O}

Location	Age group									
	60-64		65-69		70-74		75+		Total	
	n	%	n	%	n	%	n	%	n	%
	Females									
Home	240	45.9%	284	50.5%	362	54.7%	3047	80.2%	3933	70.9%
Public place	132	25.2%	131	23.3%	144	21.8%	348	9.2%	755	13.6%
Other location	61	11.7%	66	11.7%	66	10.0%	223	5.9%	416	7.5%
Garden	17	3.3%	26	4.6%	23	3.5%	62	1.6%	128	2.3%
Home - other person's	13	2.5%	8	1.4%	23	3.5%	63	1.7%	107	1.9%
Holiday	24	4.6%	26	4.6%	22	3.3%	20	0.5%	92	1.7%
Public building	10	1.9%	6	1.1%	8	1.2%	14	0.4%	38	0.7%
Work	<15	2.7%	7	1.2%	6	0.9%	***	0.0%	28	0.5%
Hospital	***	0.8%	***	0.5%	***	0.5%	15	0.4%	25	0.5%
Special event	5	1.0%	***	0.4%	0	0.0%	***	0.0%	8	0.1%
Public park/playground	***	0.2%	***	0.4%	***	0.3%	***	0.1%	7	0.1%
Public transport	0	0.0%	***	0.2%	***	0.3%	***	0.1%	5	0.1%
Educational establishment	***	0.2%	0	0.0%	0	0.0%	***	0.1%	***	0.1%
Sport	***	0.2%	0	0.0%	***	0.2%	***	0.0%	***	0.1%
Total	523	100.0%	562	100.0%	662	100.0%	3801	100.0%	5548	100.0%
Location	Males									
	60-64		65-69		70-74		75+		Total	
	n	%	n	%	n	%	n	%	n	%
	Males									
Home	180	51.3%	205	50.9%	226	59.2%	1383	76.2%	1994	67.5%
Public place	73	20.8%	102	25.3%	73	19.1%	196	10.8%	444	15.0%
Other location	38	10.8%	40	9.9%	36	9.4%	119	6.6%	233	7.9%
Garden	***	0.9%	<10	1.7%	12	3.1%	47	2.6%	69	2.3%
Home - other person's	7	2.0%	11	2.7%	12	3.1%	33	1.8%	63	2.1%
Work	31	8.8%	11	2.7%	***	1.0%	***	0.2%	49	1.7%
Holiday	10	2.8%	8	2.0%	9	2.4%	9	0.5%	36	1.2%
Hospital	***	0.3%	5	1.2%	***	0.5%	16	0.9%	24	0.8%
Sport	***	0.9%	7	1.7%	***	0.5%	***	0.2%	16	0.5%
Public building	***	0.3%	***	0.2%	***	1.0%	5	0.3%	11	0.4%
Public park/playground	***	0.6%	***	1.0%	***	0.5%	0	0.0%	8	0.3%
Prison	***	0.6%	***	0.2%	0	0.0%	0	0.0%	***	0.1%
Public transport	0	0.0%	***	0.2%	0	0.0%	***	0.1%	***	0.1%
Total	351	100.0%	403	100.0%	382	100.0%	1816	100.0%	2952	100.0%

^N There were 1,579 AED attendances where the incident location was unknown; these have been omitted from the table. Please note that Royal Blackburn Hospital does not record the incident location.

^O Please note that all numbers less than five have been suppressed (with ***) in line with patient confidentiality and if there is only one number less than five in a category then two numbers will be suppressed to prevent back calculations from totals.

Overall, 45.7% of females aged 60 years and above were discharged, followed by 27.4% who required a follow-up or referral for further treatment and 25.9% who were admitted to hospital (Table 9). A slightly higher proportion of males were discharged (48.1%), with over a quarter (25.9%) admitted to hospital and 24.4% requiring a referral or follow-up.

As the age group of females increased, the proportion of patients admitted to hospital increased. One in ten (10.3%) of 60-64 year old females were admitted compared to 30.5% of females aged 75 years or more. As the number of females admitted to hospital increased with age, the number of females requiring a follow-up or referral for further treatment decreased: 40.9% of females aged between 60 and 64 years compared to 23.7% of females aged 75 years and above.

Similarly, the number of males admitted to hospital increased overall to 31.1% of males aged 75 years or more, after a slight decrease from 16.4% of 60-64 year olds to 14.5% within the 65-69 years category. The numbers of males requiring follow-up treatment decreased across all age groups, from three in ten (30.4%) of males aged between 60 and 64 to one-fifth (22.0%) of males aged 75 years and above.

Table 9: Number of AED attendances for fall-related injuries by disposal method, age group and gender (Lancashire residents aged 60 years plus only), October 2012 to September 2013^{P,Q}

Disposal method	Age group									
	60-64		65-69		70-74		75+		Total	
	n	%	n	%	n	%	n	%	n	%
Females										
Discharged	272	48.3%	302	47.8%	367	48.0%	2073	44.8%	3014	45.7%
Follow-up/referral	230	40.9%	224	35.4%	254	33.2%	1095	23.7%	1803	27.4%
Admitted	58	10.3%	102	16.1%	137	17.9%	1412	30.5%	1709	25.9%
Other	***	0.5%	***	0.6%	<10	0.8%	<45	1.0%	57	0.9%
Died	***	0.0%	***	0.0%	***	0.1%	***	0.1%	5	0.1%
Total	563	100.0%	632	100.0%	765	100.0%	4628	100.0%	6588	100.0%
Males										
Discharged	190	49.4%	243	54.4%	227	51.4%	1007	46.0%	1667	48.1%
Admitted	63	16.4%	65	14.5%	88	19.9%	680	31.1%	896	25.9%
Follow-up/referral	117	30.4%	125	28.0%	121	27.4%	481	22.0%	844	24.4%
Other	<15	3.6%	<15	2.9%	6	1.4%	<25	0.9%	<55	1.5%
Died	***	0.3%	***	0.2%	0	0.0%	***	0.0%	***	0.1%
Total	385	100.0%	447	100.0%	442	100.0%	2189	100.0%	3463	100.0%

^P There were 28 AED attendances where the disposal method was unknown; these have been omitted from the table.

^Q Please note that all numbers less than five have been suppressed (with ***) in line with patient confidentiality and if there is only one number less than five in a category then two numbers will be suppressed to prevent back calculations from totals.

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